

CLAIMS

1. An information recording method comprising the steps of:

detecting a defect present on an optical disk having concentric or spiral tracks when information is recorded on said optical disk, and

changing recording density in response to the value of the detection frequency of said defects.

2. An information recording method comprising the steps of:

detecting a defect present on an optical disk having concentric or spiral tracks when picture information is recorded on said optical disk, and

changing the recording density of the picture information and the number of pixels in the picture information per unit time in response to the value of the detection frequency of defects.

3. An information recording method in accordance with claim 1 further comprising the steps of:

lowering recording density when a first predetermined number of defects are detected, and

raising recording density when the number of defects detected in subsequent predetermined period is less than a second predetermined number.

4. An information recording method in accordance with claim 1, wherein

a determination is made whether said defect is present or absent in response to a drop from a predetermined threshold value in the amplitude of a signal obtained on the basis of the reflected light of a light irradiating said optical disk to record information.

5. An information recording method comprising the steps of:

irradiating light for recording information on a desired track of an optical disk,

obtaining a detection signal by detecting light reflected by said track,

detecting a defect on the basis of a drop in the level of said detection signal from a predetermined threshold value, and

changing recording density in response to said detection frequency of defects.

6. An information recording method in accordance with claim 5, wherein

said detection frequency of defects is represented by the number of defects detected continuously.

7. An information recording method in accordance with claim 5, wherein

said detection frequency is represented by the number of defects detected per unit time.

8. An information recording method in accordance with claim 5, wherein

said detection frequency is represented by a rate of error correction blocks having said defect in a predetermined number of error correction blocks of said optical disk.

9. An information recording method in accordance with claim 5, wherein

said recording density is changed in error correction block units.

10. An information recording method in accordance with claim 9, wherein

an integer number of error correction blocks are recorded in an area specified by a physical ID disposed at predetermined intervals on said optical disk.

11. An optical disk recording apparatus comprising:

a defect detection section for detecting a defect present on an optical disk having concentric or spiral tracks when picture information is recorded on said optical disk and for generating a defect determination signal in response to the value of the detection frequency of said defects,

a bit rate control section for changing a bit rate of recording in response to said defect determination signal, and

a pixel control section for changing the number of pixels in said picture information per unit time in

response to said defect determination signal.

12. An optical disk recording apparatus in accordance with claim 11, wherein

said defect detection section generates said defect determination signal when the amplitude of a signal obtained on the basis of the reflection light of light irradiated to said optical disk to record information is a predetermined value and below, and

said defect detection section does not generate said defect determination signal when the state of the amplitude of said signal being larger than said predetermined value continues for a predetermined period.

13. An optical disk recording apparatus in accordance with claim 11, wherein

said pixel control section has a variable picture filter changeable a cut-off frequency, and said cut-off frequency is changed depending on said defect determination signal.

14. An optical disk recording apparatus comprising:

an optical head having a light source for emitting light for recording information on desired tracks of an optical disk and a light-receiving device for detecting light reflected from said optical disk and outputting a detection signal depending on the intensity of the reflected light,

a defect detection section for detecting defects present on said optical disk in response to the level of said detection signal,

a frequency detection section for obtaining the detection frequency of defects detected by said defect detection section,

a bit rate control section for controlling the bit rate of information to be recorded on said optical disk in response to the frequency obtained by said frequency detection section, and

a pixel control section for changing the number of pixels in picture information per unit time in response to the control output of said bit rate control section.

15. An optical disk recording apparatus in accordance with claim 14, wherein

said frequency detection section is an SR flip-flop circuit.